Building Code Compliance Packages
Gaining Acceptance for Alternatives

A Presentation by the

Development Center for Appropriate Technology (DCAT)

in conjunction with the

Building Science Consortium of *Building America*

for the

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The Need for Change

Since 1996 DCAT has been working to facilitate building code acceptance for more sustainable materials, designs and methods of construction.

Our program, *Building Sustainability into the Codes*, has been revealing that safeguarding the public health, safety and welfare includes responsibility for a much larger set of risks and impacts from buildings than just those occurring at the building site or in the present timeframe.

We've Not Been Alone in Seeing This…

"Safety is very important, but we need to think about the responsibilities for our collective safety; especially the welfare of future generations who, it's worth noting, are unable to represent their interests."

- the late Bob Fowler, P.E., FAIA, C.B.O., Founder and Founding Chairman of the Board of the International Code Council

International Building Code *2000 edition*

101.3 *The purpose of this code is to* establish the minimum requirements to *safeguard the public health, safety and general welfare* through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property *from* fire and other *hazards attributed to the built environment.*

Awareness - One Part of Our Strategy

Recognizing & balancing this larger set of risks related to buildings creates the foundation for widespread acceptance of code requirements for such things as:

- building energy performance
- indoor air quality, and
- addressing the environmental impacts of buildings.

Once aware of these risks, code officials can see this as part of their core responsibility to safeguard the public from hazards attributed to the built environment.

Capacity Building - The Other Part

Once there is recognition of the need for change, the next step is to build the capacity for change. The key elements of this process are:

- Education and Training for code officials
- Developing information resources
- Developing technical resources

For a variety of reasons, this isn't always enough…

Building the Capacity for Change

REALITY - Innovation and change in design and construction is usually slow and daunting.

REALITY - The same regulations designed to minimize negative outcomes often serve as barriers to positive change.

REALITY - Some recent innovations based on building science and other efforts to reduce the environmental impacts of buildings conflict with building code requirements.

Building the Capacity for Change

REALITY - In some cases, those designing and building with alternative designs, materials and methods don't understand them adequately…

REALITY - …Neither do the code officials.

REALITY - This leads to lengthy and sometimes unsuccessful code approval processes, quality problems or failures in the field, and greatly extended timeframes for acceptance or outright rejection of viable and beneficial alternatives.

What's Needed

An effective solution to this problem would be to package all the critical information about an alternative needed on either side of the building regulatory counter in a user-friendly form and make it easily available to whoever needs it.

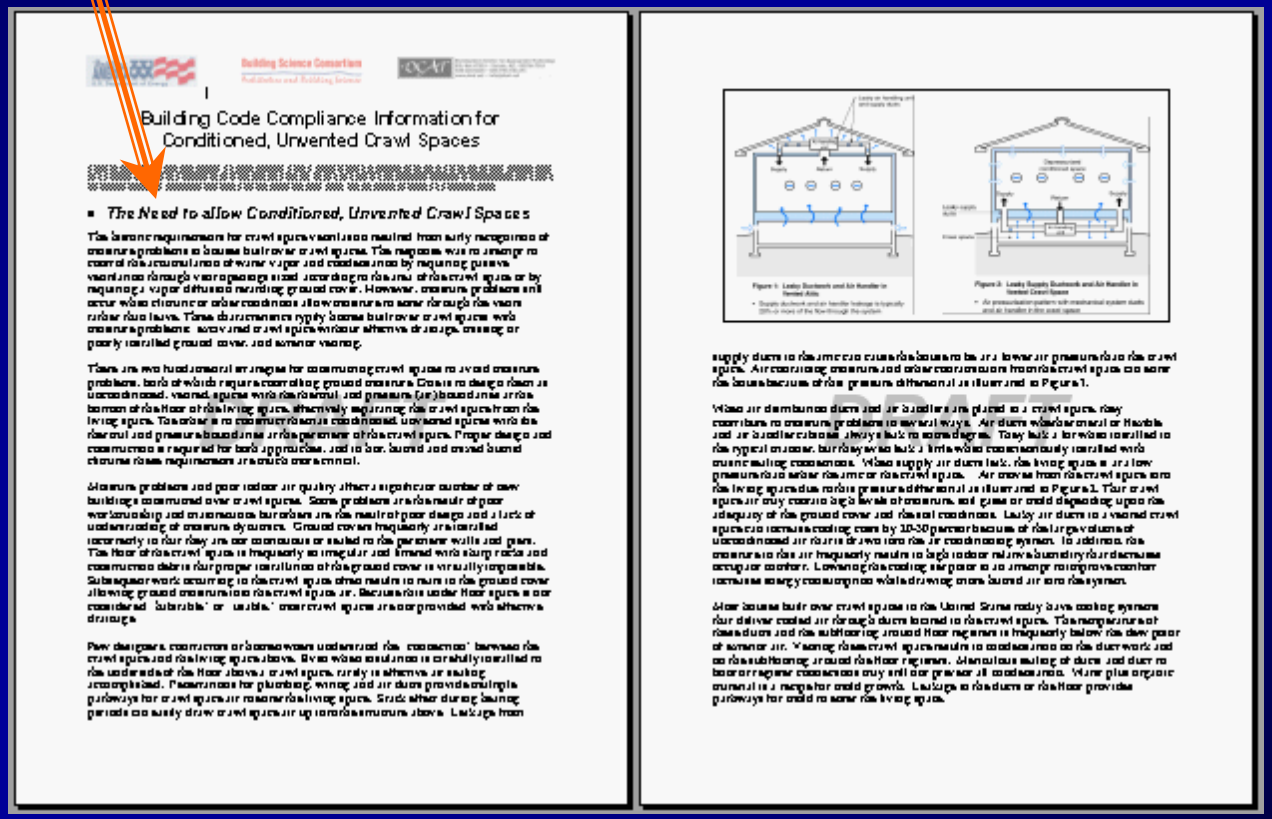
The Building Code Compliance Package!

What Information is Included?

- Problem Statement/Need for the Alternative
- Relevant Existing Code Provisions
- Building Science/Technical Basis for the Alternative
- Detailed Description of the Alternative
- Supporting Research Results, Test Data (or referenced summary)
- Criteria Recommended to Accept the Alternative
- Recommended Specifications and/or Details
- Specific Guidance for Plan Reviewers and Inspectors
- Suggested Code Change Language

An Example: Conditioned, Unvented Crawl Spaces

The need for Conditioned,
Unvented Crawl Spaces



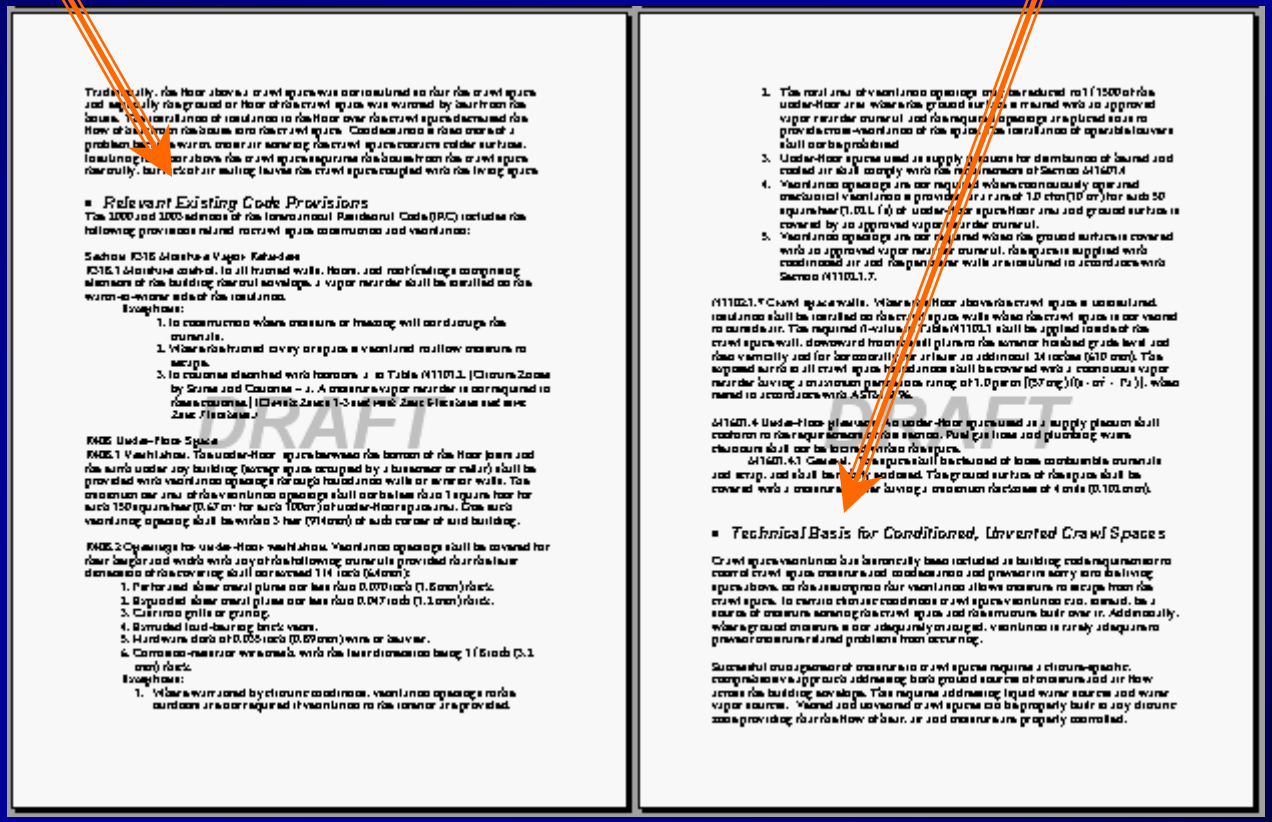
Building Code Compliance Information for
Conditioned, Unvented Crawl Spaces

- *The Need to allow Conditioned, Unvented Crawl Spaces*

An Example: Conditioned, Unvented Crawl Spaces

Relevant existing code provisions

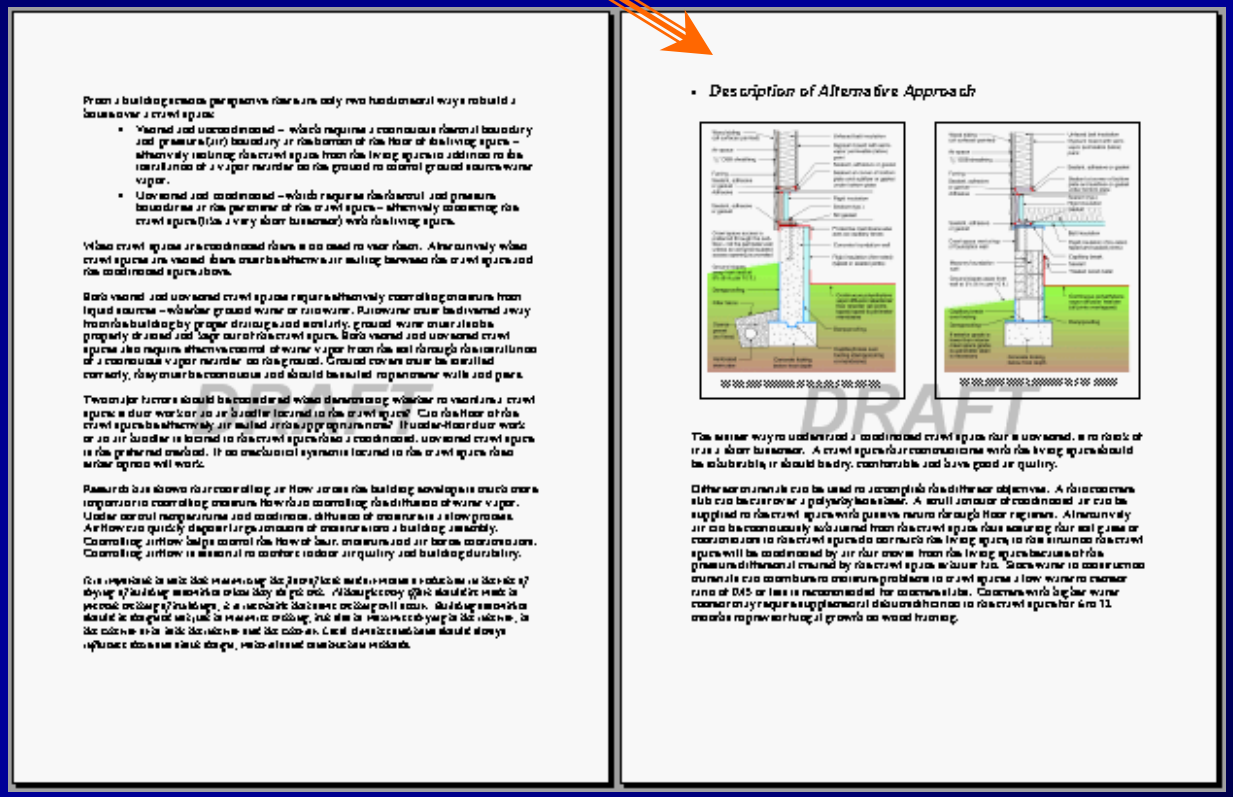
Technical basis for conditioned crawl spaces



Development Center for Appropriate Technology - 2003

An Example: Conditioned, Unvented Crawl Spaces

Description of Alternative approach

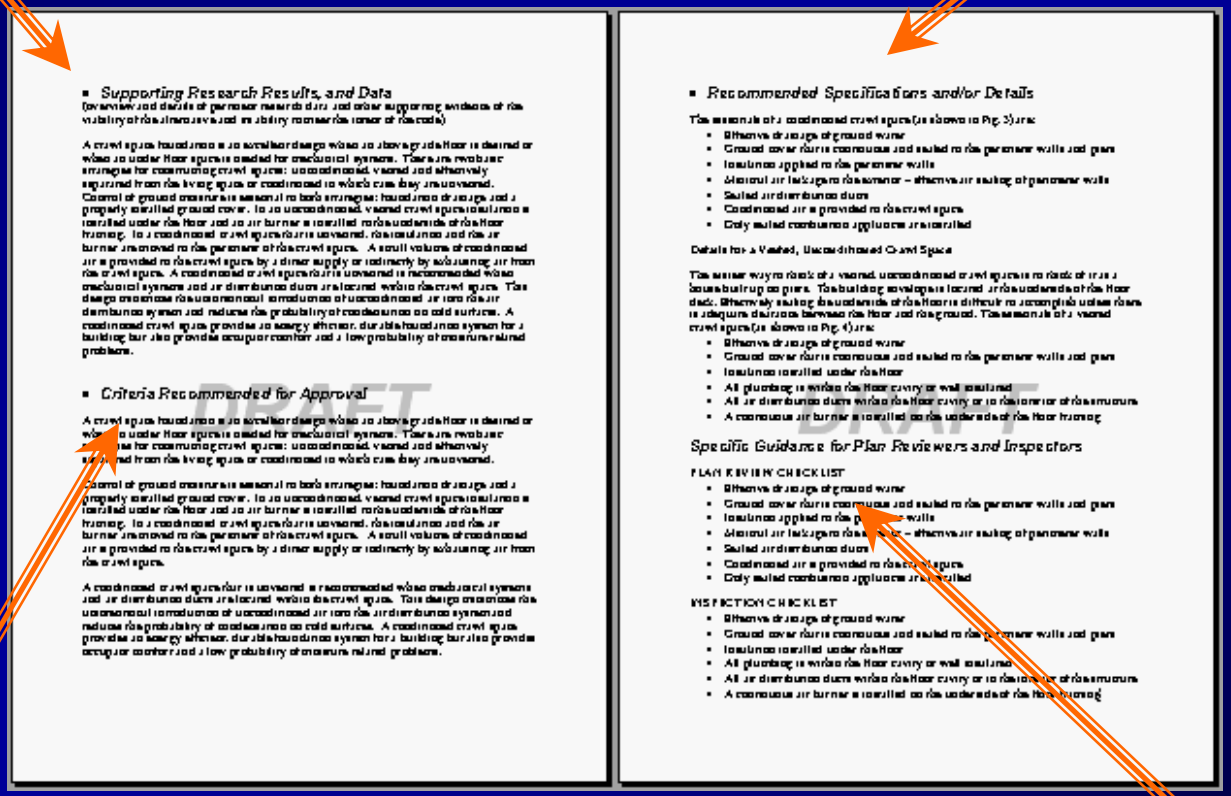


- *Description of Alternative Approach*

An Example: Conditioned, Unvented Crawl Spaces

Supporting Research Results and Data

Recommended details and Specifications



- *Supporting Research Results, and Data*

- *Criteria Recommended for Approval*

- *Recommended Specifications and/or Details*

Specific Guidance for Plan Reviewers and Inspectors

PLAN REVIEW CHECKLIST

INSPECTION CHECKLIST

Criteria for approval

Review & Inspection Checklist

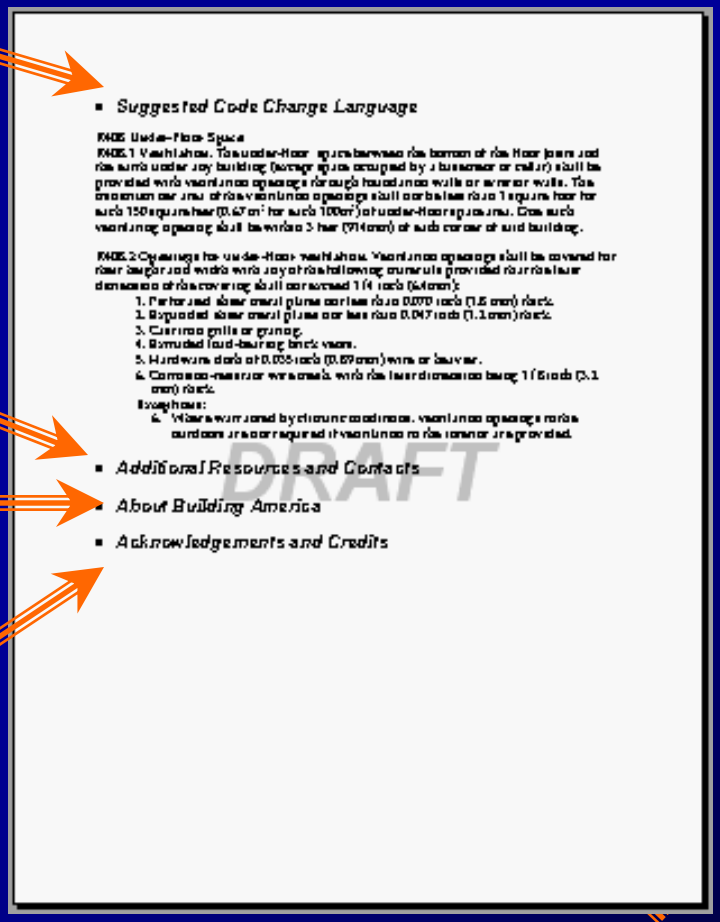
An Example: Conditioned, Unvented Crawl Spaces

Suggested Code Change Language

Additional Resources and Contacts

About Building America

Acknowledgements and credits



Next Steps

There are enormous potential benefits to accelerating the acceptance and proper design, construction, code approval and use of many innovations and alternatives to mainstream building practice.

By providing accurate, useful, and easily accessible information to designers, builders, building owners and operators, and the building regulatory community this goal can be met effectively.

We are seeking support and partners to develop a range of these information packages for alternative designs, materials, methods, equipment and systems.

Next Steps

Among the organizations we are approaching in the development of these code compliance packages is the International Code Council. It is our hope that they can be developed in partnership with ICC to help ensure credibility, widespread acceptance, and use, as well as to streamline the code change process where appropriate changes are identified.

It is also hoped that this process will accelerate the development of a strong partnership between the building science and building codes communities.

For More Information

For more information about this project please contact:

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